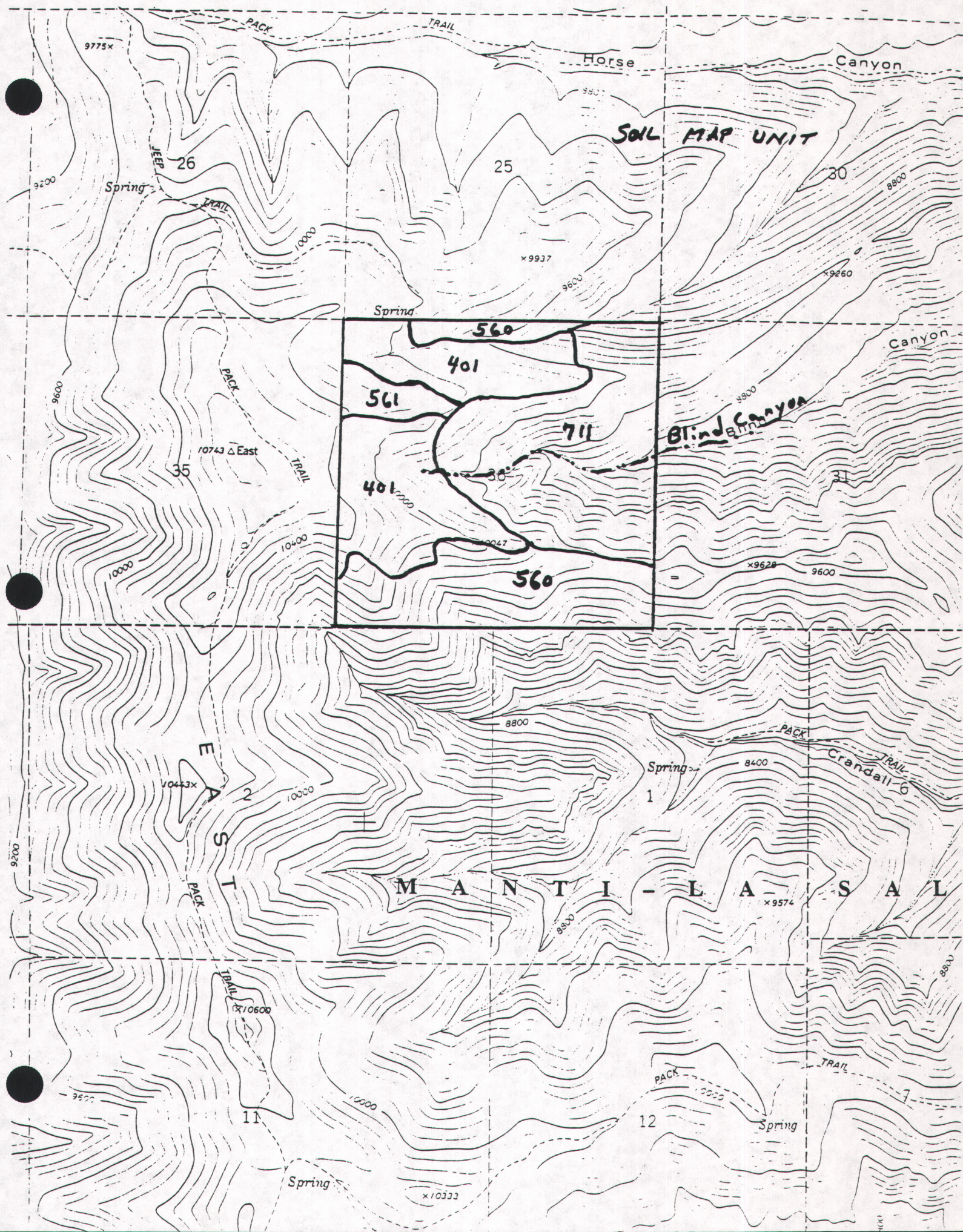


APPENDIX 7-27

MANTI-LASAL NATIONAL FOREST SOIL DATA



MAP UNIT NAME: ADEL - MERINO
ADDEL COMPLEX; 8 TO 60% SLOPES

MAP UNIT SETTING

Landform: RIDGES AND THE ADJACENT SIDESLOPES OF STEEP MOUNTAIN SLOPES

Geology (parent material): SANDSTONE AND SHALE

Broad vegetative type: GRASSES, FORBS, MOUNTAIN BIG SAGEBRUSH

WESTERN CONEFOWER, TALL LARKSPUR, SCATTERED ASPEN CLONES

Elevation range: 8,600 to 11,000 feet

Climatic factors (mean annual):

Precipitation: 25 to 30 inchesAir temperature: 32 to 38 degrees F.Freeze-free period: 20 to 30 days

COMPOSITION

40 percent: ADEL
40 percent: MERINO FAMILY SOILS
40 percent: ADDEL FAMILY MERINO FAMILY SOILS
20 percent:

20 percent contrasting inclusions of shallow soils over shale,
 clayey soils, and moderately deep soils.

MERINO ADEL FAMILY SOIL

Taxonomic classification: PACIFIC CRYOBOROLL, FINE-LOAMY, MIXED.

Parent materials: MIXED SHALE AND SANDSTONE

Landscape position: CONCAVE LOWER MOUNTAIN STEEP SLOPES

Slope range: 30 to 60 percentVegetative community type: Tall Forb

Reference soil profile characteristics:

0 to 42 inches: LOAM VERY DARK GRAYISH BROWN LOAM
42 to 50 inches: SILT LOAM BROWN SILT LOAM
 to _____ inches:
 to _____ inches:
 to _____ inches:
 to _____ inches:

Depth class: DEEP

Drainage class: WELL DRAINED

Saturated hydraulic conductivity (permeability): MODERATEAvailable water capacity: HIGH

Hydrologic group: B

Potential rooting depth: 48-60 inchesSurface rock fragments: 0 TO 15 PERCENT

Runoff: MODERATE

Soil erodibility: MODERATEErosion hazard (exposed soil): WATER: HIGH, WIND: LOWAASHTO classification: A-4

Potential for mass movement:

ADEL ^{MERINO} FAMILY SOIL

Taxonomic classification: LITHIC CRYORTHENT, LOAMY-SKELETAL, MIXED
(nonacid)

Parent materials: SANDSTONE

Landscape position: CONVEX, ~~GONGAVE SIDESLOPES~~ BELOW RIDGE TOPS AND UPPER SLOPES

Slope range: 8 to 60 percent

Vegetative community type: Forb - grass

Reference soil profile characteristics:

0 to 5 inches: ~~CBV-L~~ BROWN VERY COBBLY LOAM
5 to 12 inches: ~~SBV-L~~ LIGHT YELLOWISH BROWN VERY COBBLY LOAM
12 to + inches: ~~WB~~ WEATHERED SANDSTONE BEDROCK
to inches:
to inches:
to inches:

Depth class: SHALLOW

Drainage class: SOMEWHAT EXCESSIVELY

Saturated hydraulic conductivity (permeability):

Available water capacity: LOW

Hydrologic group: C

Potential rooting depth: 12-20 inches

Surface rock fragments: 20 to 50 PERCENT

Runoff: ~~LOW~~ MEDIUM TO RAPID

Soil erodibility: LOW TO MODERATE

Erosion hazard (exposed soil): LOW MODERATE

~~AASHTO classification:~~

~~Potential for mass movement:~~

FAMILY SOIL

Taxonomic classification:

Parent materials:

Landscape position:

Slope range: _____ to _____ percent

Vegetative community type:

Reference soil profile characteristics:

_____ to _____ inches:
_____ to _____ inches:
_____ to _____ inches:
_____ to _____ inches:
_____ to _____ inches:
_____ to _____ inches:

Depth class:

Drainage class:

Saturated hydraulic conductivity (permeability):

Available water capacity:

Hydrologic group:

MAP UNIT NAME: GREYBACK FAMILIES COMPLEX; 5 TO 50% SLOPES

MAP UNIT SETTING

Landform: SLOPING TO STEEP MOUNTAINSIDES

Geology (parent material):

Broad vegetative type: ASPEN

Elevation range: 8,500 to 10,000 feet

Climatic factors (mean annual):

Precipitation: 25 to 30 inchesAir temperature: 34 to 38 degrees F.Freeze-free period: 40 to 80 days

COMPOSITION

³
45 percent: CLAYBURN FAMILY SOILS45 percent: GREYBACK FAMILY SOILS

percent: _____

10 percent contrasting inclusions of soils with steeper slopes, clayey soils, and soils less than 20 inches deep.CLAYBURN FAMILY SOIL

Taxonomic classification: ARGIC PACHIC CRYOBOROLLS, FI-LO, MIXED.

Parent materials: LIMESTONE AND SHALE

Landscape position: SHORT CONVEX SLOPES

Slope range: 5 to 40 percentVegetative community type: ASPEN-TALL FORB

Reference soil profile characteristics:

<u>0</u>	to	<u>9</u>	inches:	DARK BROWN LOAM
<u>9</u>	to	<u>28</u>	inches:	DARK BROWN CLAY LOAM
<u>28</u>	to	<u>60</u>	inches:	VERY PALE BROWN VERY COBBLY LOAM
_____	to	_____	inches:	
_____	to	_____	inches:	
_____	to	_____	inches:	

Depth class: DEEP

Drainage class: WELL DRAINED

Saturated hydraulic conductivity (permeability): HIGH

Available water capacity: ~~6 TO 8 INCHES~~ MODERATE

Hydrologic group: B

Potential rooting depth: 60 inchesSurface rock fragments: 0 TO 10 PERCENTRunoff: ~~LOW~~ MODERATE

Soil erodibility: MODERATE

Erosion hazard (exposed soil): MODERATE

~~AASHTO classification: A-6~~~~Potential for mass movement:~~

GREYBACK FAMILY SOIL

Taxonomic classification: TYPIC CRYOBOROLLS, LO-SK, MIXED.

Parent materials: LIMESTONE AND SHALE

Landscape position: CONVEX MOUNTAIN SIDES

Slope range: 30 to 50 percentVegetative community type: *ASPEN-SNOW BERRY, ASPEN-TALL FORB*

Reference soil profile characteristics:

<u>0</u>	to	<u>11</u>	inches:	VERY DARK GRAYISH BROWN COBBLY LOAM
<u>11</u>	to	<u>33</u>	inches:	VERY PALE BROWN VERY COBBLY LOAM
<u>33</u>	to	<u>60</u>	inches:	LIGHT YELLOWISH BRWN VERY COBBLY LOAM
<u> </u>	to	<u> </u>	inches:	
<u> </u>	to	<u> </u>	inches:	
<u> </u>	to	<u> </u>	inches:	

Depth class: DEEP (40 TO 60 INCHES) AND VERY DEEP (MORE THAN 60 INCHES)

Drainage class: WELL DRAINED

Saturated hydraulic conductivity (permeability): HIGH

Available water capacity: ~~4 TO 6 INCHES~~ MODERATE

Hydrologic group: B

Potential rooting depth: 60 inches OR MORESurface rock fragments: 10 TO 40 PERCENT

Runoff: MEDIUM

Soil erodibility: LOW TO MODERATE

Erosion hazard (exposed soil): MODERATE

~~AASHTO classification: A-6~~~~Potential for mass movement:~~

SOIL MAP UNIT NO. 561

MAP UNIT NAME: CLAYBURN - FAIM - BEHANIN FAMILIES COMPLEX;

5 TO 40% SLOPES

MAP UNIT SETTING

Landform: RIDGES AND MOUNTAINSIDES

Geology (parent material): SANDSTONE, SHALE, LIMESTONE, COLLUVIUM

Broad vegetative type:

Elevation range: 8,400 to 10,300 feet

Climatic factors (mean annual):

Precipitation: 25 to 30 inches

Air temperature: 34 to 38 degrees F.

Freeze-free period: 40 to 80 days

COMPOSITION

³
55 percent: CLAYBURN FAMILY
20 percent: FAIM FAMILY
15 percent: BEHANIN FAMILY
10 percent contrasting inclusions.

CLAYBURN FAMILY SOIL

Taxonomic classification: ARGIC PACHIC CRYOBOROLLS, FI-LO, MIXED.

Parent materials: SANDSTONE, SHALE, LIMESTONE, COLLUVIUM

Landscape position: CONVEX

Slope range: 5 to 40 percent

Vegetative community type: Aspen-Tall forb and Aspen-snowberry

Reference soil profile characteristics:

0 to 9 inches: DARK BROWN LOAM
9 to 28 inches: DARK BROWN CLAY LOAM
28 to 60 inches: VERY PALE BROWN VERY COBBLY LOAM
to inches:
to inches:
to inches:

Depth class: DEEP

Drainage class: WELL-DRAINED

Saturated hydraulic conductivity (permeability): MODERATE

Available water capacity: 8 TO 10 INCHES HIGH

Hydrologic group: B

Potential rooting depth: 60 inches

Surface rock fragments: 5 TO 15 PERCENT

Runoff: MEDIUM

Soil erodibility: MODERATE

Erosion hazard (exposed soil): LOW TO MODERATE

~~AASHTO classification: A-6~~

~~Potential for mass movement:~~

FAIM FAMILY SOIL

Taxonomic classification: ARGIC PACHIC CRYOBOROLLS, FINE, MONT.
 Parent materials: *SHALE, SANDSTONE, LIMESTONE, COLLUVIUM*
 Landscape position: CONCAVE
 Slope range: 5 to 20 percent
 Vegetative community type: *ASPEN-TALL FORB*

Reference soil profile characteristics:

0	to	8	inches:	DARK GRAYISH BROWN CLAY LOAM
8	to	30	inches:	BROWN CLAY
30	to	42	inches:	BROWN CLAY LOAM
42	to	60	inches:	PALE BROWN LOAM
	to		inches:	
	to		inches:	

Depth class: DEEP (40 TO 60 INCHES)

Drainage class: MODERATELY WELL DRAINED

Saturated hydraulic conductivity (permeability): MODERATELY LOW

Available water capacity: 7 TO 9 INCHES

Hydrologic group: C

Potential rooting depth: 60 inchesSurface rock fragments: *0 TO 10 PERCENT*

Runoff: MEDIUM

Soil erodibility: MODERATE

Erosion hazard (exposed soil): LOW TO MODERATE

~~AASHTO classification: A-7~~~~Potential for mass movement:~~BEHANIN FAMILY SOIL

Taxonomic classification: PACHIC CRYOBOROLLS, LO-SK, MIXED

Parent materials: *SANDSTONE, SHALE*

Landscape position: CONVEX

Slope range: 10 to 30 percentVegetative community type: *ASPEN-SNOWBERRY, ASPEN-TALL FORB*

Reference soil profile characteristics:

0	to	13	inches:	DARK BROWN LOAM
13	to	25	inches:	DARK BROWN VERY STONY LOAM
25	to	31	inches:	LIGHT GRAY EXTREMELY STONY LOAM
31	to	45	inches:	VERY PALE BROWN EXTREMELY STONY CLAY LOAM
45	to	+	inches:	FRACTURED AND WEATHERED SANDSTONE AND SHALE
	to		inches:	

Depth class: DEEP (40 TO 60 INCHES)

Drainage class: WELL DRAINED

Saturated hydraulic conductivity (permeability): MODERATE

Available water capacity: ~~4 TO 6 INCHES (LOW)~~ LOW TO MODERATE

Hydrologic group: B

Potential rooting depth: 60 inches

Surface rock fragments: 5 TO 20 PERCENT

Runoff: SLOW

Soil erodibility: MODERATE

Erosion hazard (exposed soil): LOW TO MODERATE

~~AASHTO classification: A-4~~

~~Potential for mass movement:~~

SOIL MAP UNIT NO. 711

MAP UNIT NAME: BUNDO - LUCKY STAR - ADEL COMPLEX; 30 TO 70% SLOPES

MAP UNIT SETTING

Landform: NORTHERLY EXPOSURES OF MOUNTAIN SLOPES
 Geology (parent material): COLLUVIUM AND ALLUVIUM FROM SANDSTONE.
 Broad vegetative type: SPRUCE, FIR, ASPEN, GRASSES, SNOWBERRY, FORBS.
 Elevation range: 8,200 to 11,000 feet
 Climatic factors (mean annual):
 Precipitation: 25 to 30 inches
 Air temperature: 32 to 38 degrees F.
 Freeze-free period: 10 to 30 days

COMPOSITION

50 percent: BUNDO FAMILY
20 percent: LUCK STAR FAMILY
20 percent: ADEL FAMILY
10 percent contrasting inclusions.

BUNDO FAMILY SOIL

Taxonomic classification: TYPIC PALEBORALF, LO-SK, MIXED.
 Parent materials: SANDSTONE
 Landscape position: CONVEX SLOPES
 Slope range: 40 to 70 percent
 Vegetative community type: SPRUCE - FIA

Reference soil profile characteristics:

3 to 0 inches: ORGANIC BROWN
0 to 6 inches: COBBLY FINE SANDY LOAM
6 to 50 inches: VERY COBBLY FINE SANDY LOAM
50 to 60 inches: YELLOWISH BROWN VERY COBBLY LOAM
 to inches:
 to inches:

Depth class: DEEP
 Drainage class: SOMEWHAT EXCESSIVE
 Saturated hydraulic conductivity (permeability): LOW
 Available water capacity: 0.08 TO 0.12 INCHES MODERATE
 Hydrologic group: A
 Potential rooting depth: 60 inches
 Surface rock fragments: 5% GRAVEL, 2% COBBLE, 2% STONE
 Runoff: SLOW
 Soil erodibility: MODERATE
 Erosion hazard (exposed soil): WATER EROSION: MODERATE
 AASHTO classification: A-4
 Potential for mass movement:

LUCKY STAR FAMILY SOIL

Taxonomic classification: BORALFIC CRYOBOROLL, LO-SK, MIXED.

Parent materials: COLLUVIUM FROM SANDSTONE AND SHALE

Landscape position: CONVEX SLOPE

Slope range: 30 to 60 percent

Vegetative community type: SPRUCE-FIR, ASPEN (USUALLY MIXED FIR AND ASPEN)

Reference soil profile characteristics:

0 to 15 inches: ^{DARK GRAYISH BROWN} COBBLY LOAM 25%
 15 to 38 inches: VERY COBBLY VERY FINE SANDY LOAM 25%
 38 to 57 inches: ~~COB-CL~~ BROWN EXTREMELY COBBLY CLAY LOAM
 to inches: PALE BROWN
 to inches:
 to inches:
 to inches:
 to inches:

Depth class: DEEP

Drainage class: SOMEWHAT EXCESSIVE

Saturated hydraulic conductivity (permeability): ~~LOW~~ MODERATE

Available water capacity: MODERATE

Hydrologic group: B

Potential rooting depth: ^{40 TO 60} ~~50~~ inchesSurface rock fragments: ~~5% GRAVEL, 2% COBBLE~~ 5 TO 20 PERCENT

Runoff: SLOW TO MEDIUM

Soil erodibility: LOW

Erosion hazard (exposed soil): MODERATE TO HIGH

AASHTO classification: A-2

Potential for mass movement:

ADEL FAMILY SOIL

Taxonomic classification: PACIFIC CRYOBOROLL, LO-SK, MIXED.

Parent materials: SANDSTONE, SHALE, LIMESTONE, COLLUVIUM

Landscape position: CONCAVE

Slope range: 30 to 60 percent

Vegetative community type: ASPEN

Reference soil profile characteristics:

0 to 42 inches: LOAM DARK BROWN LOAM
 42 to 50 inches: SILTY LOAM BROWN SILT LOAM
 to inches:
 to inches:
 to inches:
 to inches:
 to inches:

Depth class: DEEP

Drainage class: WELL DRAINED

Saturated hydraulic conductivity (permeability): LOW

Available water capacity: HIGH

Hydrologic group: B

Potential rooting depth: ^{40 TO 60} ~~50~~ inches

Surface rock fragments: 5 TO 10 PERCENT

Runoff: LOW TO MODERATE

Soil erodibility: MODERATE

Erosion hazard (exposed soil): MODERATE TO HIGH